

9/8/05

updated search

AB The invention provides a method of screening a substance for the ability to affect the formation of a retinoid X receptor (RXR) homodimer comprising combining the substance and a solution containing RXR receptors and determining the presence of homodimer formation. The screening method can be used to determine compds. which selectively activate homodimer formation and heterodimer formation. Also provided is a method of screening a substance for an effect on a RXR receptor homodimer's ability to bind DNA comprising combining the substance with the homodimer and determining the effect of the compound on the homodimer's ability to bind DNA. Finally, the invention provides methods of activating RXR receptor homodimer formation. Bridged bicyclic aromatic compds. are provided. These compds. are useful for modulating gene expression of retinoic acid receptors, vitamin D receptors and thyroid receptors. Pharmaceutical compns. and methods for modulating gene expression are provided as well. Retinoids were identified that specifically induce RXR homodimer formation and activate RXR homodimers on specific genetic response elements but not RAR/RXR heterodimers. These retinoids allow the specific activation of RXR-selective response pathways, while not inducing RAR-dependent response pathways. One of these compds., SR11237 (I), was prepared from Me 4-[(5,6,7,8-tetrahydro-5,5,8,8,-tetramethyl-2-naphthalenyl)carbonyl]benzoate (preparation given).

AN 1994:526151 CAPLUS

DN 121:126151

TI RXR receptor homodimer formation and bridged bicyclic aromatic compounds and their use in modulating gene expression and screening modulating compounds

IN Pfahl, Magnus; Zhang, Xiao Kun; Lehmann, Jurgen M.; Dawson, Marcia I.; Cameron, James F.; Hobbs, Peter D.; Jong, Ling

PA La Jolla Cancer Research Foundation, USA; SRI International

SO PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9412880	A2	19940609	WO 1993-US11492	19931124 <--
	WO 9412880	A3	19940929		
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5466861	A	19951114	US 1992-982305	19921125
	US 5552271	A	19960903	US 1992-982174	19921125
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	JP 08506323	T2	19960809	JP 1994-513405	19931124
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	US 1992-901719	B2	19920616		
	WO 1993-US11492	W	19931124		
OS	CASREACT 121:126151; MARPAT 121:126151				

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9/8/05

IT 153559-48-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

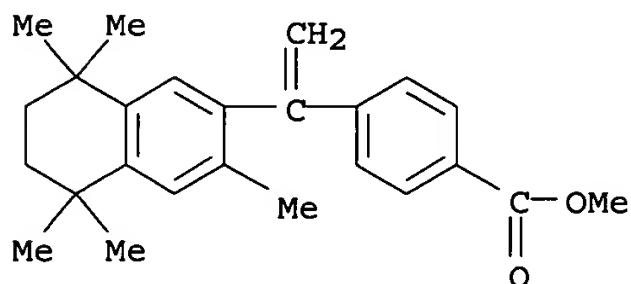
(preparation and reaction of, in preparation of compound affecting retinoid

X

receptor homodimer formation)

RN 153559-48-9 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]-, methyl ester (9CI) (CA INDEX NAME)



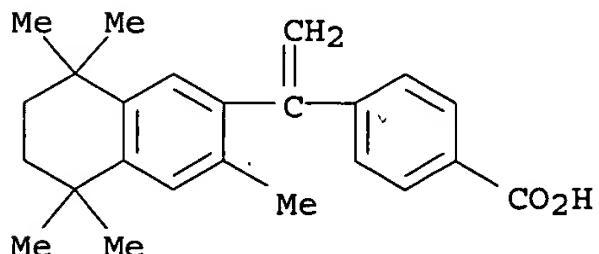
IT 153559-49-0P

RL: PREP (Preparation)

(preparation of, retinoid X receptor homodimer formation and binding to genetic response element in relation to)

RN 153559-49-0 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



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NEWS 6 MAR 03            REGISTRY/ZREGISTRY - Sequence annotations enhanced  
NEWS 7 MAR 03            MEDLINE file segment of TOXCENTER reloaded  
NEWS 8 MAR 22            KOREAPAT now updated monthly; patent information enhanced  
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NEWS 12 APR 04            EPFULL enhanced with additional patent information and new fields  
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NEWS 18 MAY 23            REGISTRY has been enhanced with source information from CHEMCATS  
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NEWS 22 JUN 27            MARPAT displays enhanced with expanded G-group definitions and text labels  
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NEWS 28 AUG 11            STN AnaVist workshops to be held in North America  
NEWS 29 AUG 30            CA/CAplus - Increased access to 19th century research documents  
NEWS 30 AUG 30            CASREACT - Enhanced with displayable reaction conditions  
  
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),

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AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

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DICTIONARY FILE UPDATES: 7 SEP 2005 HIGHEST RN 862646-13-7

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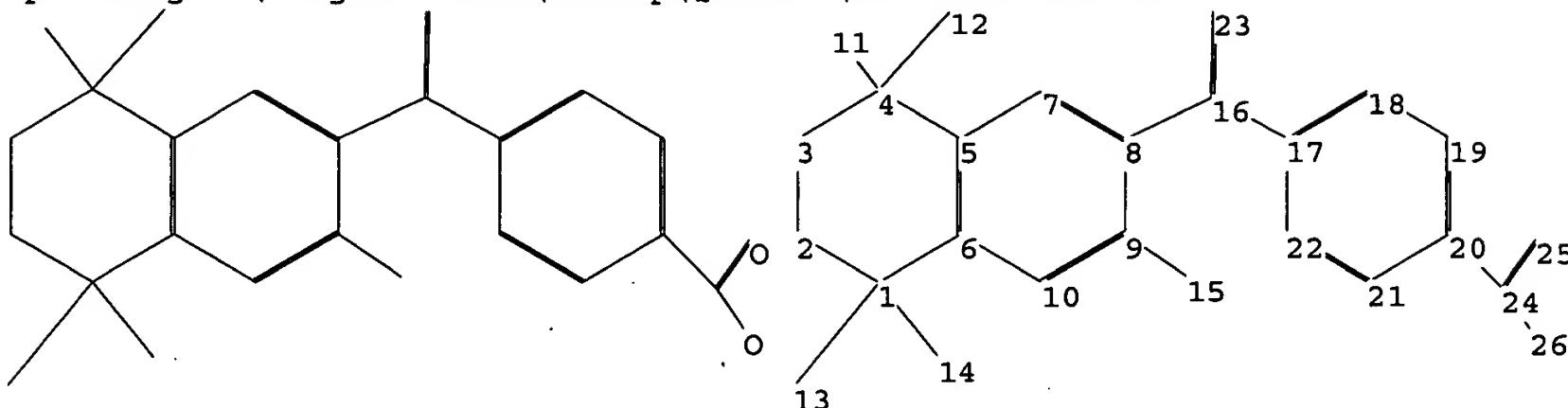
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=>

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chain nodes :

11 12 13 14 15 16 23 24 25 26

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

chain bonds :

1-13 1-14 4-11 4-12 8-16 9-15 16-17 16-23 20-24 24-25 24-26

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 17-18 17-22 18-19 19-20  
20-21 21-22

exact/norm bonds :

24-25 24-26

exact bonds :

1-2 1-6 1-13 1-14 2-3 3-4 4-5 4-11 4-12 8-16 9-15 16-17 16-23 20-24

normalized bonds :

5-6 5-7 6-10 7-8 8-9 9-10 17-18 17-22 18-19 19-20 20-21 21-22

isolated ring systems :

containing 1 : 17 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:Atom 18:Atom

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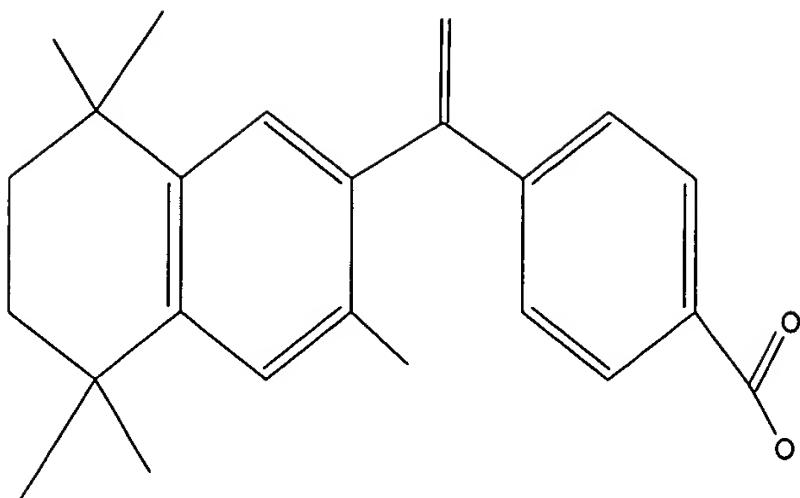
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L1 HAS NO ANSWERS

L1 STR

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Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED -      11 TO ITERATE

100.0% PROCESSED      11 ITERATIONS          3 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH **COMPLETE**
PROJECTED ITERATIONS:      22 TO      418
PROJECTED ANSWERS:         3 TO      163

L2      3 SEA SSS SAM L1

=> s 11 ful
FULL SEARCH INITIATED 11:52:02 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      243 TO ITERATE

100.0% PROCESSED      243 ITERATIONS          28 ANSWERS
SEARCH TIME: 00.00.01

L3      28 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS          SINCE FILE
                               ENTRY          TOTAL
FULL ESTIMATED COST          161.33        SESSION
                                         161.54

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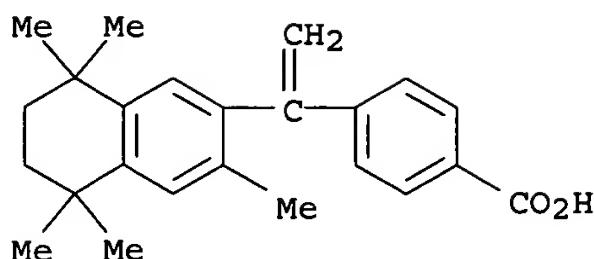
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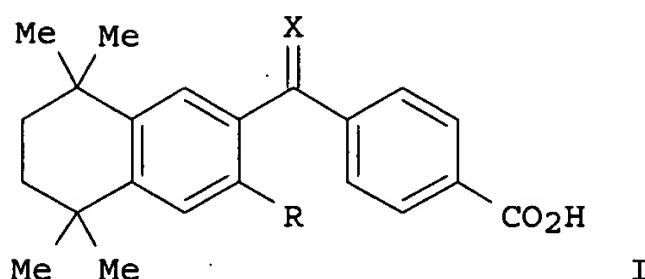
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L6  ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AB  The preparation and binding characteristics of a novel RXR (retinoid X receptor) selective tritiated radioligand is described. The results indicate that this probe may prove useful for further characterization of the RXR subtype of retinoid receptors.
AN  1995:267735 CAPLUS
DN  122:75576
TI  Biochemical characterization of a novel RXR-selective, high specific activity radioligand
AU  Mais, Dale E.; Berger, Elaine M.; Zhang, Lin; Boehm, Marcus F.
CS  Department of Pharmacology, Ligand Pharmaceuticals, Incorporated, San Diego, CA, 92121, USA
SO  Medicinal Chemistry Research (1994), 4 (6), 406-13
     CODEN: MCREEB; ISSN: 1054-2523
PB  Birkhaeuser
DT  Journal
LA  English
IT  160436-02-2P
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
     (biochem. characterization of retinoid X receptor-selective, high specific activity radioligand)
RN  160436-02-2 CAPLUS
CN  Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]-, labeled with tritium (9CI) (CA INDEX NAME)
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L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
GI



I

AB Two series of potent retinoid X receptor (RXR)-selective compds. were designed and synthesized based upon recent observation that (E)-4-[2-(5,5,8,8-tetramethyl-5,6,7,8-tetrahydro-2-naphthalenyl)-1-propenyl]benzoic acid binds and transactivates only the retinoic acid receptor (RAR) subtypes whereas its 3-Me derivative binds and transactivates both the RAR and RXR subfamilies. Functional groups in the 3-position of the tetrahydronaphthalenes I [R = H, alkyl, halo, OH, OMe; X = O, CH<sub>2</sub>] results in compds. which elicit potent and selective activation of the RXR class. Such RXR-selective compds. offer pharmacol. tools for elucidating the biol. role of the individual retinoid receptors with which they interact. Activation profiles in cotransfection and competitive binding assays as well as mol. modeling calcns. demonstrate critical structural determinants that confer selectivity for members of the RXR subfamily. The most potent compound of these series, I [R = Me, X = CH<sub>2</sub>], is the first RXR-selective retinoid (designated as LGD1069) to enter clin. trials for cancer indications.

AN 1994:656056 CAPLUS

DN 121:256056

TI Synthesis and Structure-Activity Relationships of Novel Retinoid X Receptor-Selective Retinoids

AU Boehm, Marcus F.; Zhang, Lin; Badea, Beth Ann; White, Steven K.; Mais, Dale E.; Berger, Elaine; Suto, Carla M.; Goldman, Mark E.; Heyman, Richard A.

CS Department of Medicinal Chemistry, Ligand Pharmaceuticals Inc., San Diego, CA, 92121, USA

SO Journal of Medicinal Chemistry (1994), 37(18), 2930-41  
CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

IT 153559-48-9P 158499-06-0P 158499-07-1P

158499-08-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in preparation of tetrahydronaphthylethenylbenzoic

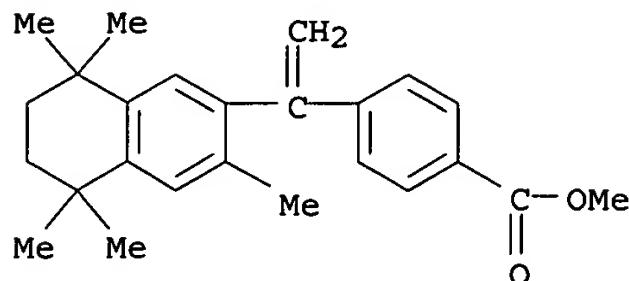
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acids)

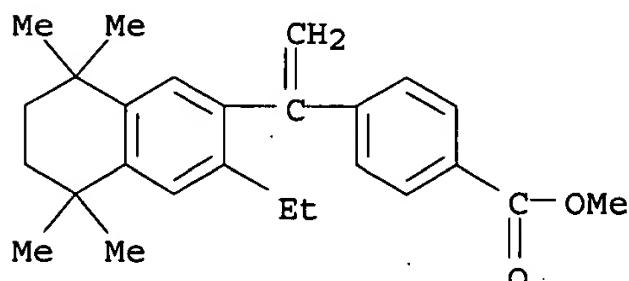
RN 153559-48-9 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]-, methyl ester (9CI) (CA INDEX NAME)



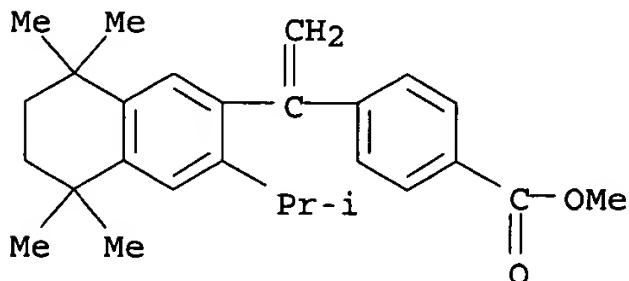
RN 158499-06-0 CAPLUS

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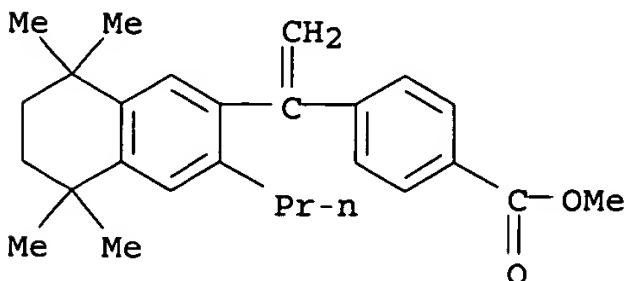
RN 158499-07-1 CAPLUS

CN Benzoic acid, 4-[1-[5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-(1-methylethyl)-2-naphthalenyl]ethenyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 158499-08-2 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-propyl-2-naphthalenyl)ethenyl]-, methyl ester (9CI) (CA INDEX NAME)



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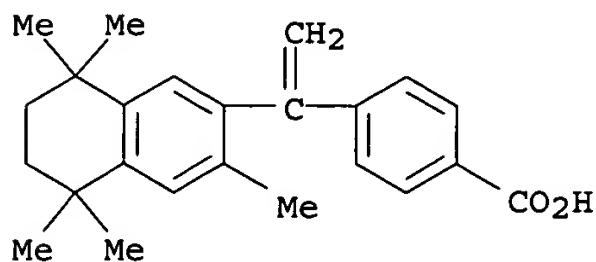
IT 153559-49-0P 153559-56-9P 153559-59-2P

158499-03-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and retinoid receptor binding of)

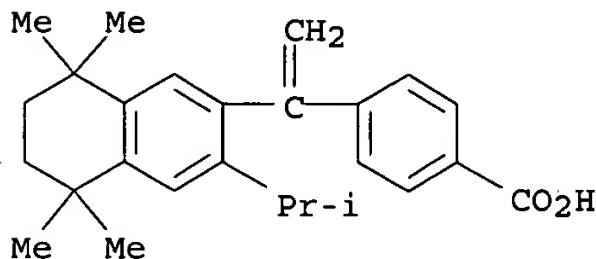
RN 153559-49-0 CAPLUS

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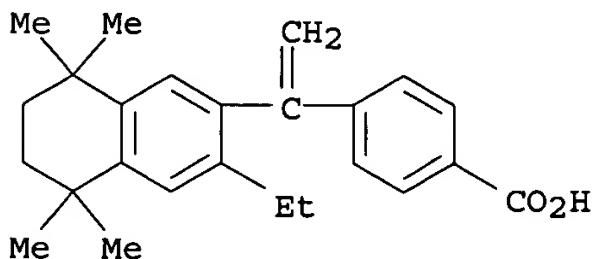
RN 153559-56-9 CAPLUS

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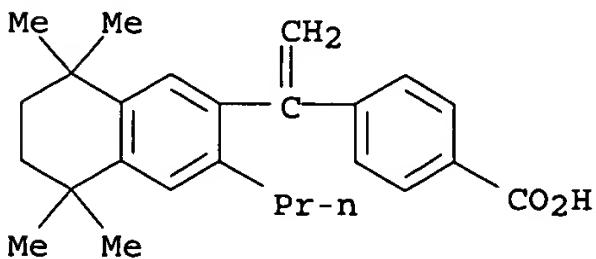
RN 153559-59-2 CAPLUS

CN Benzoic acid, 4-[1-(3-ethyl-5,6,7,8-tetrahydro-5,5,8-tetramethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



RN 158499-03-7 CAPLUS

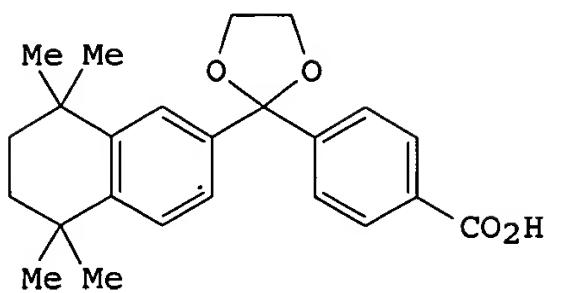
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-5,5,8-tetramethyl-3-propyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



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9/8/05

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
GI



I

AB The invention provides a method of screening a substance for the ability to affect the formation of a retinoid X receptor (RXR) homodimer comprising combining the substance and a solution containing RXR receptors and determining the presence of homodimer formation. The screening method can be used to determine compds. which selectively activate homodimer formation and heterodimer formation. Also provided is a method of screening a substance for an effect on a RXR receptor homodimer's ability to bind DNA comprising combining the substance with the homodimer and determining the effect of the compound on the homodimer's ability to bind DNA. Finally, the invention provides methods of activating RXR receptor homodimer formation. Bridged bicyclic aromatic compds. are provided. These compds. are useful for modulating gene expression of retinoic acid receptors, vitamin D receptors and thyroid receptors. Pharmaceutical compns. and methods for modulating gene expression are provided as well. Retinoids were identified that specifically induce RXR homodimer formation and activate RXR homodimers on specific genetic response elements but not RAR/RXR heterodimers. These retinoids allow the specific activation of RXR-selective response pathways, while not inducing RAR-dependent response pathways. One of these compds., SR11237 (I), was prepared from Me 4-[(5,6,7,8-tetrahydro-5,5,8,8,-tetramethyl-2-naphthalenyl)carbonyl]benzoate (preparation given).

AN 1994:526151 CAPLUS

DN 121:126151

TI RXR receptor homodimer formation and bridged bicyclic aromatic compounds and their use in modulating gene expression and screening modulating compounds

IN Pfahl, Magnus; Zhang, Xiao Kun; Lehmann, Jurgen M.; Dawson, Marcia I.; Cameron, James F.; Hobbs, Peter D.; Jong, Ling

PA La Jolla Cancer Research Foundation, USA; SRI International

SO PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DT Patent

LA English

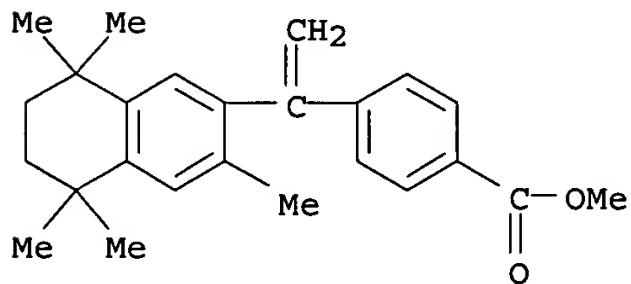
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9412880	A2	19940609	WO 1993-US11492	19931124 <--
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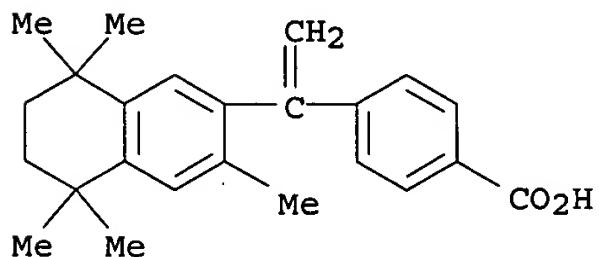
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AU 700706	B2	19990114		
EP 671005	A1	19950913	EP 1994-904805	19931124
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PRAI US 1992-982174	A	19921125		
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US 1992-901719	B2	19920616		
WO 1993-US11492	W	19931124		
OS CASREACT 121:126151; MARPAT 121:126151				
IT 153559-48-9P				
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				
(preparation and reaction of, in preparation of compound affecting retinoid X receptor homodimer formation)				
RN 153559-48-9 CAPLUS				
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]-, methyl ester (9CI) (CA INDEX NAME)				



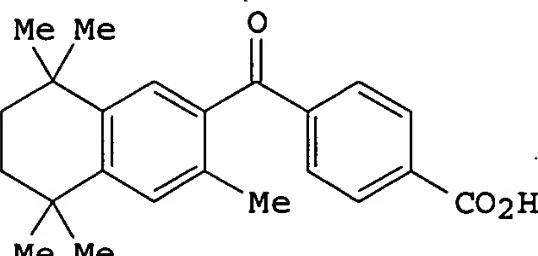
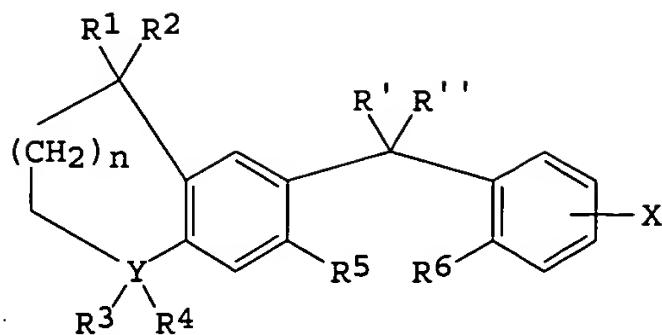
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RL: PREP (Preparation)  
(preparation of, retinoid X receptor homodimer formation and binding to genetic response element in relation to)  
RN 153559-49-0 CAPLUS  
CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)ethenyl]- (9CI) (CA INDEX NAME)



L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
GI

08141496

9/8/05



**AB** Ligands which selectively activate retinoid X receptors (RXR) in preference to retinoic acid receptors (RAR) are claimed. Claimed per se are several Markush structures, e.g., compds. I [R<sub>1</sub>, R<sub>2</sub> = H, alkyl, acyl; Y = C, O, S, N, CH(OH), CO, SO, SO<sub>2</sub>, or a salt derivative; R<sub>3</sub>, R<sub>4</sub> = H, alkyl, or is absent; R', R'' = H, alkyl, acyl, OH, alkoxy, thiol, thio ether, amino; or R'R'' = :O, :CH<sub>2</sub>, :S, :NOH, :NCN, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, etc.; R<sub>5</sub>, R<sub>6</sub> = H, alkyl, halo, NO<sub>2</sub>, OH, alkoxy, SH, alkylthio, (di)(alkyl)amino, etc.; X = CO<sub>2</sub>H or derivs., CHO, tetrazolyl, PO<sub>3</sub>H<sub>2</sub>, SO<sub>3</sub>H, CH<sub>2</sub>OH, etc.], represented by 43 synthetic examples. Thus, acylation of 1,1,4,4,6-pentamethyl-1,2,3,4-tetrahydronaphthalene by mono-Me terephthalate using PCl<sub>5</sub> and then AlCl<sub>3</sub>, and saponification of the ester product, gave title compound II. In a cotransfection assay, II activated RXR subtypes ( $\alpha$ ,  $\beta$ ,  $\gamma$ ) with efficacies of 130%, 52%, and 82%, resp. (vs. all-trans-retinoic acid as 100%), but had <2% to <4% efficacy for RAR subtypes. I synergistically increased the activities (e.g., antihyperproliferative) of RAR-active ligands, as well as other hormonal systems (e.g., clofibrate and 1,25-dihydroxyvitamin D activities).

**AN** 1994:217004 CAPLUS

**DN** 120:217004

**TI** Compounds (naphthalene and indane derivatives) having selectivity for retinoid X receptors

**IN** Boehm, Marcus F.; Heyman, Richard A.; Zhi, Lin

**PA** Ligand Pharmaceuticals Inc., USA

**SO** PCT Int. Appl., 101 pp.

CODEN: PIXXD2

**DT** Patent

**LA** English

**FAN.CNT** 1

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AU	675430	B2	19970206		
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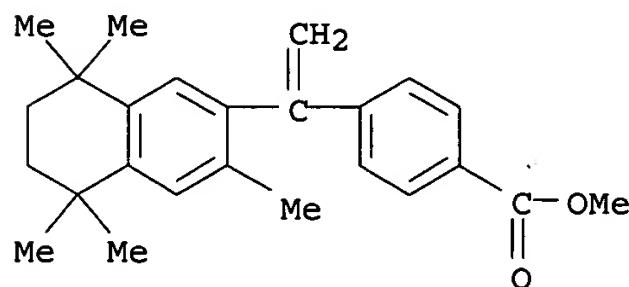
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US 1992-944783	A	19920911		
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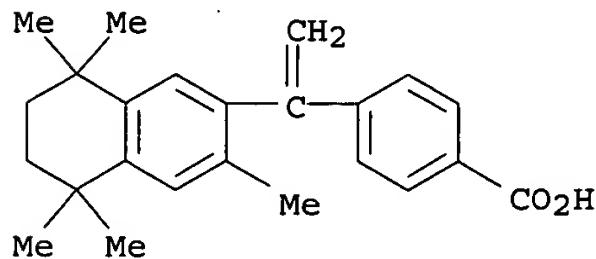
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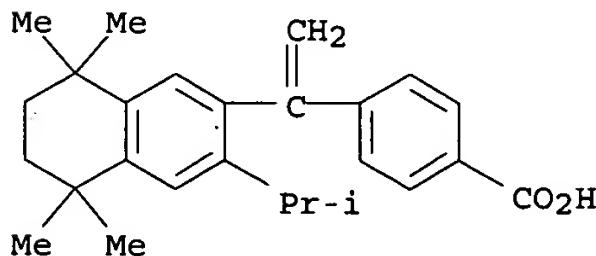
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WO 1993-US10204 W 19931022  
US 1995-479920 B1 19950607  
US 1995-485386 A1 19950607  
  
OS MARPAT 120:217004  
IT 153559-48-9P 153559-49-0P 153559-56-9P  
153559-59-2P 153559-65-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as retinoid receptor ligand)  
RN 153559-48-9 CAPLUS  
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RN 153559-49-0 CAPLUS  
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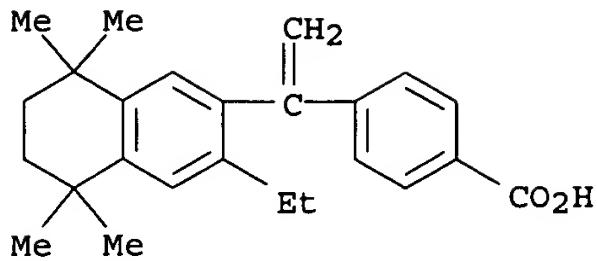
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RN 153559-59-2 CAPLUS  
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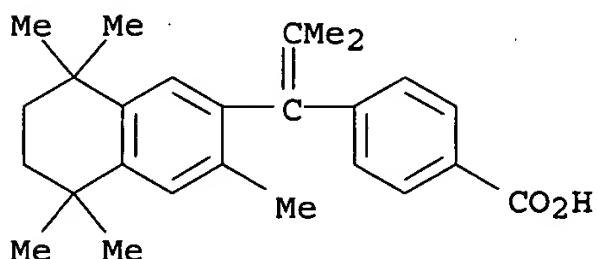
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RN 153559-65-0 CAPLUS

CN Benzoic acid, 4-[2-methyl-1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)-1-propenyl]- (9CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

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FULL ESTIMATED COST

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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CA SUBSCRIBER PRICE

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Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

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COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
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FULL ESTIMATED COST

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08141496

9/8/05

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STRUCTURE FILE UPDATES: 7 SEP 2005 HIGHEST RN 862646-13-7  
DICTIONARY FILE UPDATES: 7 SEP 2005 HIGHEST RN 862646-13-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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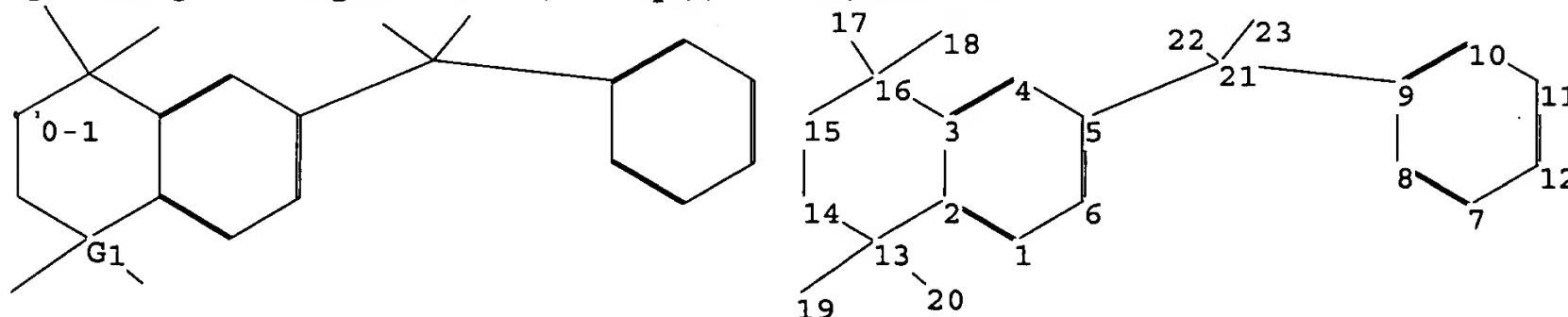
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\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
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08141496

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CA SUBSCRIBER PRICE	0.00	-2.92

08141496

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FILE COVERS 1907 - 8 Sep 2005 VOL 143 ISS 11  
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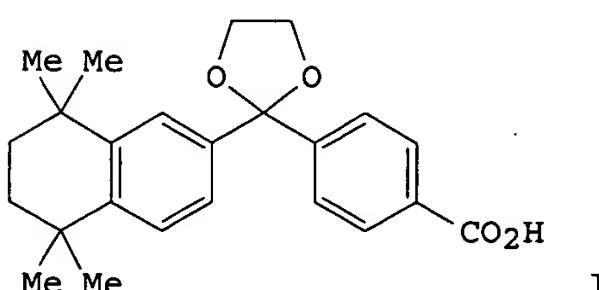
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L12  ANSWER 1 OF 2  CPLUS  COPYRIGHT 2005 ACS on STN
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AB The invention provides a method of screening a substance for the ability to affect the formation of a retinoid X receptor (RXR) homodimer comprising combining the substance and a solution containing RXR receptors and determining the presence of homodimer formation. The screening method can be used to determine compds. which selectively activate homodimer formation and heterodimer formation. Also provided is a method of screening a substance for an effect on a RXR receptor homodimer's ability to bind DNA comprising

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combining the substance with the homodimer and determining the effect of the compound on the homodimer's ability to bind DNA. Finally, the invention provides methods of activating RXR receptor homodimer formation. Bridged bicyclic aromatic compds. are provided. These compds. are useful for modulating gene expression of retinoic acid receptors, vitamin D receptors and thyroid receptors. Pharmaceutical compns. and methods for modulating gene expression are provided as well. Retinoids were identified that specifically induce RXR homodimer formation and activate RXR homodimers on specific genetic response elements but not RAR/RXR heterodimers. These retinoids allow the specific activation of RXR-selective response pathways, while not inducing RAR-dependent response pathways. One of these compds., SR11237 (I), was prepared from Me 4-[(5,6,7,8-tetrahydro-5,5,8,8,-tetramethyl-2-naphthalenyl)carbonyl]benzoate (preparation given).

AN 1994:526151 CAPLUS

DN 121:126151

TI RXR receptor homodimer formation and bridged bicyclic aromatic compounds and their use in modulating gene expression and screening modulating compounds

IN Pfahl, Magnus; Zhang, Xiao Kun; Lehmann, Jurgen M.; Dawson, Marcia I.; Cameron, James F.; Hobbs, Peter D.; Jong, Ling

PA La Jolla Cancer Research Foundation, USA; SRI International

SO PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

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US 5837725 A 19981117 US 1995-448991 19950524

PRAI US 1992-982174 A 19921125

US 1992-982305 A 19921125

US 1992-901719 B2 19920616

WO 1993-US11492 W 19931124

OS CASREACT 121:126151; MARPAT 121:126151

IT 156910-41-7P

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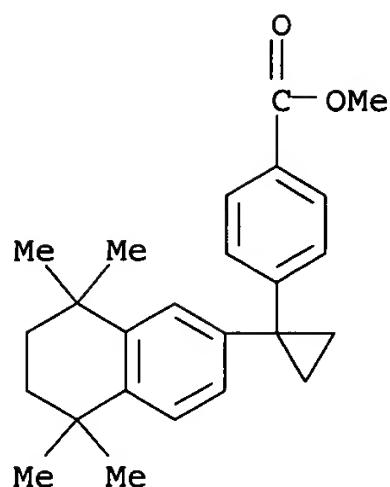
receptor homodimer formation)

RN 156910-41-7 CAPLUS

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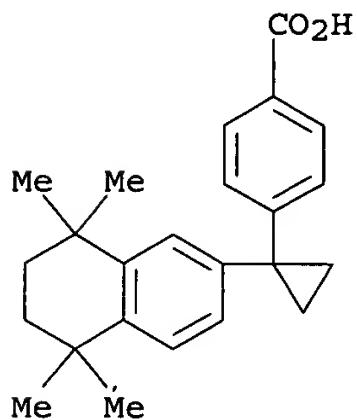
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RL: PREP (Preparation)

(preparation of, retinoid X receptor homodimer formation and binding to genetic response element in relation to)

RN 156910-31-5 CAPLUS

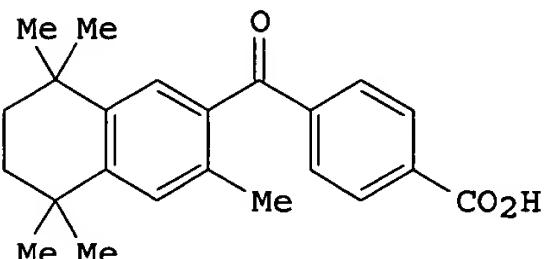
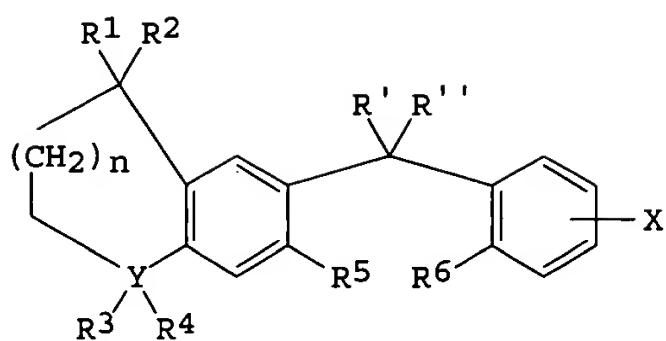
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L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
GI

08141496

9/8/05



AB Ligands which selectively activate retinoid X receptors (RXR) in preference to retinoic acid receptors (RAR) are claimed. Claimed per se are several Markush structures, e.g., compds. I [R1, R2 = H, alkyl, acyl; Y = C, O, S, N, CH(OH), CO, SO, SO<sub>2</sub>, or a salt derivative; R3, R4 = H, alkyl, or is absent; R', R'' = H, alkyl, acyl, OH, alkoxy, thiol, thio ether, amino; or R'R'' = :O, :CH<sub>2</sub>, :S, :NOH, :NCN, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, etc.; R5, R6 = H, alkyl, halo, NO<sub>2</sub>, OH, alkoxy, SH, alkylthio, (di)(alkyl)amino, etc.; X = CO<sub>2</sub>H or derivs., CHO, tetrazolyl, PO<sub>3</sub>H<sub>2</sub>, SO<sub>3</sub>H, CH<sub>2</sub>OH, etc.], represented by 43 synthetic examples. Thus, acylation of 1,1,4,4,6-pentamethyl-1,2,3,4-tetrahydronaphthalene by mono-Me terephthalate using PC15 and then AlCl<sub>3</sub>, and saponification of the ester product, gave title compound II. In a cotransfection assay, II activated RXR subtypes ( $\alpha$ ,  $\beta$ ,  $\gamma$ ) with efficacies of 130%, 52%, and 82%, resp. (vs. all-trans-retinoic acid as 100%), but had <2% to <4% efficacy for RAR subtypes. I synergistically increased the activities (e.g., antihyperproliferative) of RAR-active ligands, as well as other hormonal systems (e.g., clofibrate and 1,25-dihydroxyvitamin D activities).

AN 1994:217004 CAPLUS

DN 120:217004

TI Compounds (naphthalene and indane derivatives) having selectivity for retinoid X receptors

IN Boehm, Marcus F.; Heyman, Richard A.; Zhi, Lin

PA Ligand Pharmaceuticals Inc., USA

SO PCT Int. Appl., 101 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9321146	A1	19931028	WO 1993-US3944	19930422 <--
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	AU 9341188	A1	19931118	AU 1993-41188	19930422 <--
	AU 675430	B2	19970206		
	EP 637297	A1	19950208	EP 1993-910835	19930422
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JP 08505359	T2	19960611	JP 1993-518708	19930422
BR 9306284	A	19980113	BR 1993-6284	19930422
RU 2144913	C1	20000127	RU 1994-46449	19930422
EP 983991	A2	20000308	EP 1999-118827	19930422
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AT 195716	E	20000915	AT 1993-910835	19930422
ES 2149814	T3	20001116	ES 1993-910835	19930422
PT 637297	T	20010131	PT 1993-910835	19930422
AT 256653	E	20040115	AT 1999-118827	19930422
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JP 08505852	T2	19960625	JP 1993-515962	19931022
AT 177733	E	19990415	AT 1994-902184	19931022
ES 2129115	T3	19990601	ES 1994-902184	19931022
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PT 678086	T	20000531	PT 1994-901195	19931022
NO 9403943	A	19941221	NO 1994-3943	19941018 <--
US 5780676	A	19980714	US 1995-485386	19950607
US 5962731	A	19991005	US 1995-472784	19950607
US 6043279	A	20000328	US 1997-799396	19970212
US 6610883	B1	20030826	US 1998-115615	19980713
US 6320074	B1	20011120	US 1998-179674	19981027
GR 3032841	T3	20000731	GR 2000-400533	20000303
GR 3034841	T3	20010228	GR 2000-402529	20001113
PRAI US 1992-872707	A	19920422		
US 1992-944783	A	19920911		
US 1993-3223	A	19930111		
US 1993-27747	A	19930305		
US 1993-52051	A	19930421		
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WO 1993-US10166 W 19931022  
WO 1993-US10204 W 19931022  
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US 1995-485386 A1 19950607

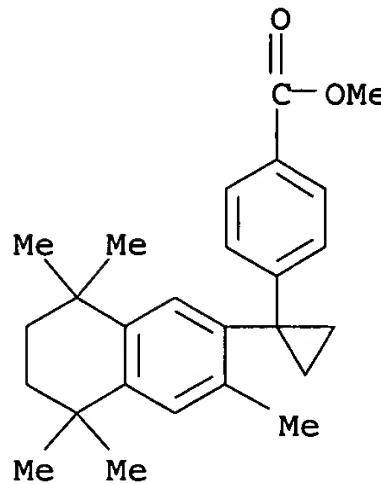
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IT **153559-88-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as intermediate for retinoid receptor ligand)

RN 153559-88-7 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)cyclopropyl]-, methyl ester (9CI) (CA INDEX NAME)

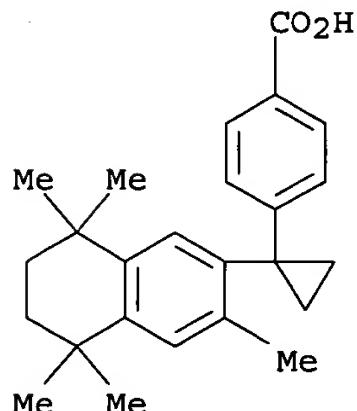


IT **153559-62-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as retinoid receptor ligand)

RN 153559-62-7 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3,5,5,8-pentamethyl-2-naphthalenyl)cyclopropyl]- (9CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

SINCE FILE  
ENTRY TOTAL  
SESSION

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FULL ESTIMATED COST	14.56	363.58
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY	SESSION
	-1.46	-4.38

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